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ABSTRACT

School modernization projects must deal with the problem of what to do with students who may be displaced during the construction. This report is based on information provided by some 50 school districts that had experienced relocation problems. Each of the major relocation strategies is examined, and its advantages, disadvantages, and requirements are discussed. To tie the discussion to real situations, the experiences of some school districts that have tried each strategy are reported. Strategies include increasing space utilization, double or extended sessions, rented or borrowed space, use of portables, surge or holding facilities, redrawing attendance boundaries, and housing by class or grade group. Examples of "Temporary Housing Strategy Worksheet" and a "Temporary Housing Strategy Decision Chart" are provided. (Author/MLF)

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Introduction

With the current decline in enrollments, many school districts now find themselves in a position to assess the physical and educational adequacy of their existing plants. In many cases they have not liked what they have found – old, often unsound, educationally obsolete buildings where maintenance programs have been deferred too often for budgetary reasons.

As a result, an increasing share of the school construction market has been claimed by projects to modernize existing facilities. Unlike new construction which adds space to a district's inventory, these modernization projects must deal with the problem of what to do with students who may be displaced during the construction.

In order to find out how various school districts are handling this problem, EFL commissioned Harry Heyl of Omega Economic Studies to conduct a telephone survey of districts which had experienced relocation problems. The following report is based on information provided by some fifty districts contacted in November 1973.

The relocation plan

There are many variables which will influence the formulation of a relocation plan. Included are such complex issues as the weight to be given the desires of individual school communities; the extent and type of the construction to be performed – renovation, addition or replacement; the location of each project; the amount and type of space available in the immediate area and in the entire district; and whether or not the district has a stock of portable classroom units.

The first question that needs to be asked in any program involving school modernization is *will the construction disrupt the educational process sufficiently to require some relocation of the students?* If, by judicious scheduling of construction – for example, doing the work in the summer when students are not in school – or some other means, disruption can be avoided, there is no relocation problem.

Temporary relocation of students may be avoided in some cases by fitting the academic schedule to that of the construction work. By closing school early one spring and starting late the following fall, the Frontier School District in Indiana was able to provide the construction contractor with an unoccupied building for long enough to complete modernization work.

On the other hand, if some major disruptions are unavoidable, a plan for temporarily housing the displaced students must be devised. The pivotal question then becomes whether the students should be kept on or near the home school site. Even though this may be highly desirable, it is not always possible. If after examining all on-site housing alternatives, all displaced students are not accommodated, the initial decision about on-site housing will have to be reconsidered.

In the following sections, each of the major relocation strategies is examined and its advantages, disadvantages and requirements are discussed. To tie the discussion to real situations, the experiences of some school districts that have tried each strategy are reported.

Strategies A1 through A5 are for on-site relocation and Strategies B1 through B6 for off-site housing of displaced students. Numbers and strategies are keyed to a decision chart and worksheet presented at the end of the article. The chart and the worksheet can be used together to assist in selecting the most appropriate strategies for either an individual school or a district-wide modernization program.

Although these strategies are presented separately for ease of discussion, it may be desirable or necessary to combine several of them. Such combinations may involve both on- and off-site relocation of students from the same school. In addition, certain strategies – surge facilities and changing of attendance zones – are more appropriate to the needs of a district undertaking an extensive modernization program than to a single school project.

Because the costs involved in implementing each of the strategies are so dependent on local conditions, no attempt has been made to provide cost comparison figures for any of the strategies.

A. On and near site housing strategies

Strategies which keep the students on or near their home school site maintain the integrity of the school – classes, peer relationships, teacher groups, extra-curricular programs and school/community ties. In addition, on-site strategies are low in cost and cause minimum change in customary student transportation and access patterns.

Aside from these considerations, however, these strategies raise some practical issues having to do with scheduling, safety and interference between students and construction contractors. Generally, the closer the students are to an area of construction work, the more likely these problems will arise. Key questions that must be asked are:

1. Does the program provide minimum interference between students, teachers and others engaged in the educational process and the contractor?

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2. Have safety procedures been carefully worked out in advance of construction?
3. Will insurance coverage have to be increased because of the increased hazard?
4. Can the contractor work in the available space?
5. Will contractor apprehension about sharing the site cause him to raise his price?
6. Will the work go more slowly because the contractor does not have access to the full site?

In the rest of this section, each of the major on-site strategies is described. The reader should bear in mind that the preceding discussion of the advantages and problems of on-site housing in general applies to each of the following strategies.

A1: Build addition or replacement facility first

Strategy:

Where the construction program includes an addition or a replacement building, the new facility can be completed prior to demolishing, modernizing or converting the old building. Students continue to use the old building until the new one is completed. If the old building is to be modernized the students are then housed in the addition until completion of the construction. This work may be programmed and implemented in stages.

Requirements:

1. For replacement construction, the school site must be large enough to hold the existing building, the new facility, and construction storage and equipment during the construction period
2. The addition must be large enough to house the students displaced by modernization of the old building (double sessions or other supplementary strategies may be required)

Advantages:

1. For replacement construction, the only move required of students is to the new building upon completion
2. For either replacement or addition projects, this is a very economical strategy

Disadvantages:

1. Tight working conditions may increase contractor's costs, slow the work and require use of adjacent streets and lots for construction activities
2. On small sites, a large portion of the playground and other outdoor athletic facilities may be lost during construction

Examples:

1. Sacramento, California, Denver, Colorado, and Rochester, New York, have all implemented replacement programs calling for the completion of new schools before students are moved from old buildings. In addition to one-to-one replacement of existing schools by new buildings on the same site, the Denver and Rochester programs include consolida-



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A2: Increasing space utilization



tion of existing schools into replacement buildings located where needed.

2. In St. Paul, Minnesota, and Boston, Massachusetts, the construction of additions has been used as a means of phasing modernization – the additions were completed first and used to house students while work was done to the old building. In St. Paul, this method has been used where the existing building is to be demolished and replaced. In Boston, the addition has been used to house students while a phased rehabilitation of the old building was performed.

Strategy:

Where the amount of modernization construction is small, or where the work may be phased in small packages, only those students whose classes are most severely disrupted by the construction work need be relocated. These classes may be temporarily housed in supportive spaces, such as the library, gym, cafeteria or multi-purpose room, or in partially or fully unused spaces.

Requirements:

1. The modernization program must be such that sufficient educationally adequate space to temporarily house the classes and programs displaced is available during the school year
2. Complete coordination of construction and class relocation schedules must be made prior to taking bids

Advantage:

In terms of relocation costs, this is one of the most economical strategies

Disadvantages:

1. Temporary housing of classes in supportive spaces, such as libraries and gyms, will interfere with the regular functions of these spaces
2. Relocation spaces may not be wholly adequate for their educational purpose, especially for high service activities such as science
3. The amount of space that can be made available to the contractor is limited by the availability of space to house displaced students

Examples:

1. Because the disruption was brief, displaced students could be temporarily housed in unused and supportive spaces in their own schools during district-wide air-conditioning programs in Houston, Dallas and Austin, Texas. The success of these programs has been attributed by all three districts to careful coordination and to cooperation between contractors and school principals.
2. In Montgomery County, Maryland, as in other locations, the inevitable disruptions of noise and dirt which accompany sharing the school with modern-

ization contractors are endured only because they are preferable to the problems raised by other strategies.

A3: Double or extended sessions

Strategy:

Generally speaking, greater areas of the building can be isolated from construction-generated interference by extending the school day or going to full double sessions.

Requirement:

The construction program must be such that at least one-half of the general educational spaces and most of the supportive spaces are available at all times during the school year

Advantages:

1. Supportive spaces not involved in modernization construction may be used normally
2. Smaller numbers of students in school at any one time permits housing to minimize interference between educational and construction activities

Disadvantages:

1. Because of the disruptions in daily schedules, strong opposition may be encountered from students, teachers and working parents who may not be able to rearrange their schedules
2. The costs of plant operation and maintenance will increase, but will remain considerably less than the costs of operating two schools on single sessions
3. Administrative requirements will increase
4. Extended or double sessions may interfere with some special programs

Example:

To deal with overcrowding resulting from rapid population growth, the Colton, Oregon, school district chose to go on double sessions in preference to acquiring portable classrooms. Their added costs are for operation and maintenance, and for running their busses on double schedules. The district feels that the educational and economic advantages outweigh the disadvantages.

A4: Rented or borrowed space

Descriptions of supplementary space strategies which can be used to temporarily house displaced students on or near their school site are presented under off-site strategies B5 & B6.

A5: Use of portables

B. Off-site temporary housing strategies

B1: Surge or holding facilities

If it is either impossible or undesirable to temporarily house students on or near their home school site, then an off-site housing strategy must be adopted. If students are relocated off-site, the school site is free for construction, possibly resulting in faster and more economical work. There is also less hazard from the proximity of students to dangerous construction work.

Off-site relocation, however, may require the breaking up of school, grade and/or class groups and will likely disrupt the school's ties to its neighboring community. Because such a strategy may interfere with their established life patterns, opposition from students, teachers and parents may be encountered. Finally, unless relocation facilities are within walking distance of the home school, the district may have to provide transportation for students – a difficult problem in a time of fuel shortages and cost increases.

These considerations should be borne in mind by the reader, as they apply to all of the off-site housing strategies described in the following sections.

Strategy:

During large-scale modernization and new construction projects, displaced or unhoused students can be accommodated in school groups in surge or holding facilities. As each project is completed, the faculty and students are moved into the finished facility and another school group into the surge facility. This strategy is most useful to a district with a large modernization program or extensive overcrowding.

Requirement:

Surge facilities may be provided in:

- An empty school
- Portables on an available site
- Space obtained through a lease-back arrangement with a developer

Advantages:

1. For districts with overcrowding problems, the use of surge facilities allows the district to delay making capital investment in new schools until more is known about population trends, size of capital investment required, etc.
2. Surge facilities can house an entire school group causing no disruptions in ties and relationships within the school

Disadvantages:

1. Obtaining surge facilities may place a strain on the district operating budget
2. In some cases rental and lease-back arrangements may be difficult to implement
3. Supportive, high service and special facilities will have to be provided unless the surge facility is a school

Example:

Because of very rapid growth in one area of the district the Ann Arbor, Michigan, School District reexamined the possible use of additional portables to house students. The district found that it was paying about \$5 per square foot to rent portables, while office space in the area was renting for \$2 per square foot. Because of this cost advantage and uncertainty about the actual numbers and locations of new students, the district asked a private developer to buy a conveniently located parcel of land and erect a building on it to the school district's specifications. The district agreed to lease the building on a yearly basis for up to five years. When not needed by the district the building could be rented as commercial office space. Thus far the arrangement has proven thoroughly satisfactory to all parties involved.

B2: Redrawing attendance boundaries

Strategy:

Students can be temporarily assigned to other public schools by redrawing attendance boundaries. This redrawing may include only affected schools or it may be district wide.

Requirement:

Space in other schools in the district is available to house the displaced students, largely as individuals

Advantage:

All students have access to supportive facilities

Disadvantages:

1. School, grade and class groups may be broken up, thus disrupting relationships
2. Depending upon the availability of space, redrawing attendance boundaries may require the implementation of other temporary housing strategies at the receiving school, such as double sessions or increased space utilization, thereby introducing further disadvantages
3. If overcrowding results, supportive facilities and special programs may be overtaxed

Example:

When it has relocated students, the Cleveland, Ohio, School District has redistricted the displaced students into other neighborhood schools within walking distance, or into rented space in parochial schools. This has been a successful practice and has received community support.

B3: Housing by class or grade group

Strategy:

If space is available in receiving schools, students may be relocated temporarily as class or grade groups instead of individuals.

Requirements:

1. Space – either fully or partially unused classrooms, or supportive spaces, such as cafeterias, multi-pur-

pose rooms, or gymnasiums – must be available at the receiving school(s)

2. A plan must be prepared showing how students will be housed at receiving schools

Advantages:

1. Class or grade groups remain intact
2. If supportive spaces are not required for temporary housing, displaced students have access to these services

Disadvantages:

1. Maintenance and operating costs at the receiving schools may be increased
2. If such spaces are required for temporary housing at receiving schools, relocating students in supportive spaces will interfere with their function
3. Some underutilized spaces may not be educationally adequate
4. Some key educational spaces – science labs, shops – and special programs at receiving schools may be overtaxed

Example:

The Philadelphia School District has a number of underutilized schools which it uses for temporary housing. Provided they are within a half-hour ride, the district prefers to bus displaced students to them. Rented space of all kinds is the second choice and portable classrooms a distant third.

The district does a cost analysis of every situation where relocation is required, and has found that bussing has generally been the least expensive alternative. There is the added advantage that students will have supportive facilities at the receiving school, which may not be the case with rented facilities.

B4: Extended or double sessions at receiving schools

Strategy:

The entire faculty and student body of the school undergoing modernization may be relocated as a group by placing a receiving school on extended or double sessions.

Requirements:

1. Sufficient general education and supportive space at the receiving school to house the displaced administration, faculty and students must be made available by extending the school day or going on double sessions
2. A *modus vivendi* for the two schools must be established – this may be separate administrations for a double session school, the placing of one administration in charge of the building, or some compromise

Advantages:

1. Supportive spaces at the receiving school may be used normally

2. The school group remains intact, minimizing breaking of ties within the school

Disadvantages:

1. Because of the disruptions in daily schedules, strong opposition may be encountered from students, teachers and working parents of both school groups
2. Administrative problems may increase
3. Extending or doubling sessions may interfere with some special programs of both schools

Example:

When fire destroyed an Indianapolis, Indiana, school, its student body was temporarily relocated at a nearby school. To accommodate the increase, the receiving school was placed on double sessions with both its regular students and those displaced by the fire on half-day sessions.

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The following strategies require the acquisition by the district of supplementary space of one kind or another. Because many of the considerations about these strategies are the same whether they are used to supplement an on- or off-site relocation program, they will be treated together. Where considerations do vary by place of application, these variations will be mentioned.

**B5 and A4:
Rented or
borrowed
space**

Strategy:

Students can be temporarily reassigned to rented or loaned facilities in non-school district buildings, including parochial schools, churches and commercial space.

Requirements:

1. Suitable space, educationally and environmentally adequate and safe, must be available
2. Available space must be suitably located: within walking distance (for on-site strategies), or reachable by public transportation or district-provided bussing (for off-site strategies)
3. Adequate operating funds must be available to rent, operate and maintain the facilities

Advantages:

1. Space within walking distance of the existing school may allow the school group to remain intact
2. Consistent with the modernization program, students housed in space within walking distance may be able to use the supportive facilities and special programs of the existing school

Disadvantages:

1. Even space located within walking distance may be sufficiently difficult of access from the existing school to compromise the use of supportive facilities and special programs
2. Supportive facilities may not be available
3. Obtainable space may not be adaptable to uses requiring a high level of service such as science labs



B6 and A5: Use of portables

Example:

The New York City School District is well known for its use of rented space, when other alternatives are not suitable. The district has also found that parochial schools are closing at such a rate that they are often available when rental space in neighborhoods is needed.

Strategy:

Portable classrooms may be used to house displaced students either on-site, at a relocation school, or by creation of a surge facility.

Requirements:

1. Sufficient portable classroom units of an adequate type must be available to house displaced students
2. The site must be large enough to house the portable classrooms and other necessary activities, including construction, playground, etc.
3. Utility connections must be provided for the portable units
4. Operating funds must be available to lease or purchase portable units, provide utility connections and other site preparation, place units on site and make connections, and remove them at the end of project

Advantages:

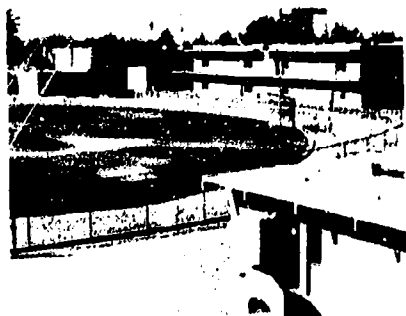
1. If used on-site at either the school being modernized or the receiving school, the school's supportive facilities and special programs may be used
2. If transportation of displaced students is not feasible, providing space in portables may be the only alternative
3. Depending upon the costs of moving them and their utilities connections, the school district may benefit from increased utilization of portables they already own

Disadvantages:

1. Used on-site, portable units may take up space needed for construction or recreation activities
2. The costs of renting or purchasing, connecting and moving portables is increasing rapidly
3. Portables are not adequate for all types of educational programs and functions
4. Portables tend to become permanent

Example:

When the main building of Los Angeles High School was damaged beyond repair in a 1971 earthquake, the problem of temporarily housing the school's 3100 students while the facility was replaced was solved by the use of portable units. Because many supportive and auxiliary facilities had not been destroyed, it was possible to put the school back in service by adding an 85,000 square foot temporary facility composed of one- and two-story portable classroom units. The temporary facility was put in use seven months after the 'quake.



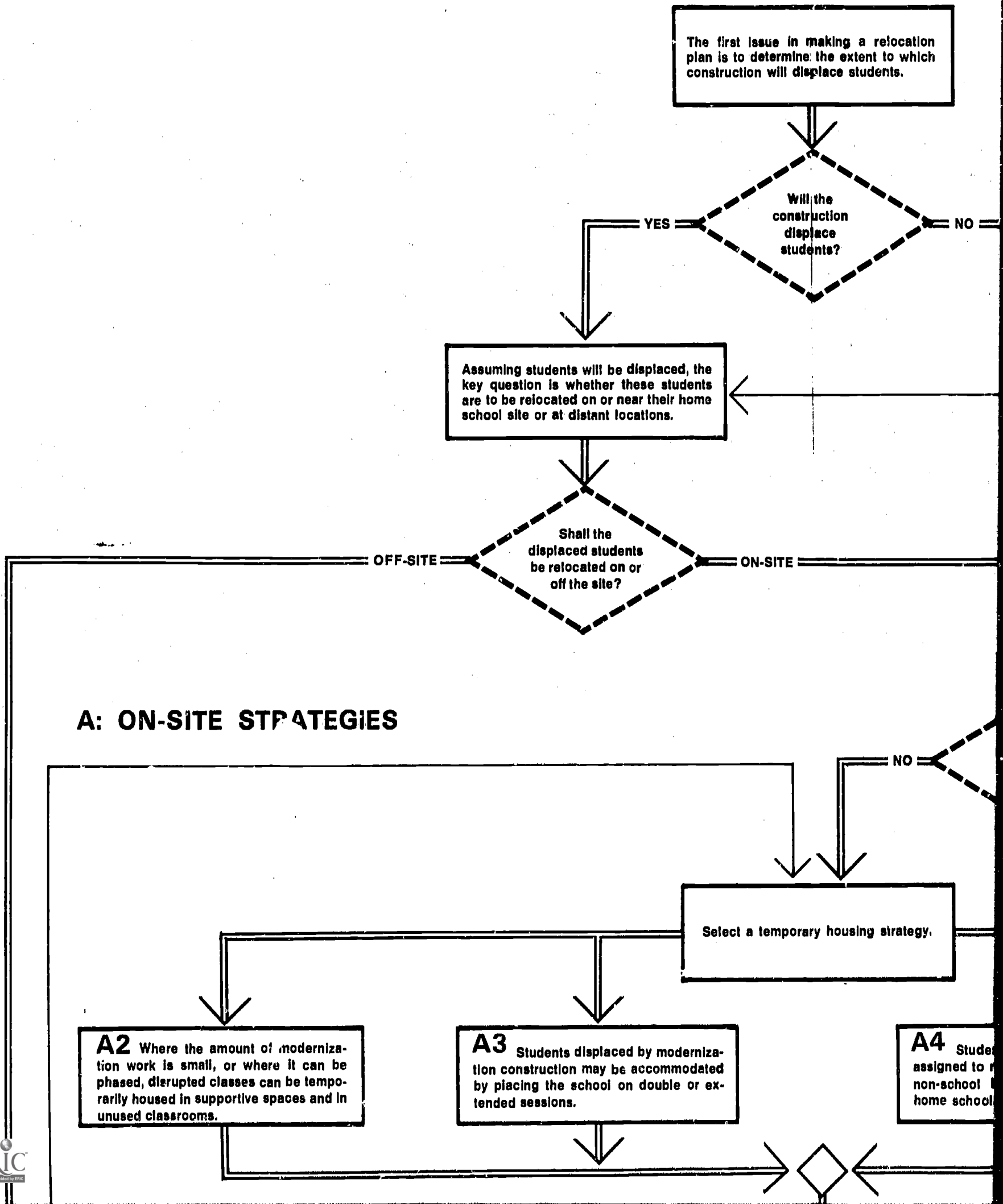
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TEMPORARY HOUSING STRATEGY WORKSHEET

SCHOOL			
NUMBER OF STUDENTS DISPLACED			
HOUSING STRATEGY	LOCATION	NUMBER HOUSED	BALANCE UNHOUSED
A1: Addition	On-site		
A2: Supportive spaces	On-site		
A3: Double or extended sessions	On-site		
A4: Rented or borrowed space	In school neighborhood		
A5: Portables	On-site		
B1: Surge or holding facilities			
B2: Redraw attendance boundaries			
B3: Existing school(s)	1		
	2		
	3		
B4: Double sessions at receiving school(s)	1		
	2		
	3		
B5: Rented or borrowed space			
B6: Portables	1		
	2		
	3		

TEMPORARY HOUSING STRATEGY DECISION CHART



TEMPORARY HOUSING STRATEGY DECISION CHART

The first issue in making a relocation plan is to determine the extent to which construction will displace students.

Will the
construction
displace
students?

YES

NO

be displaced, the
er these students
or near their home
at locations.

ON-SITE

Does the
program include
an addition or
replacement?

NO

YES

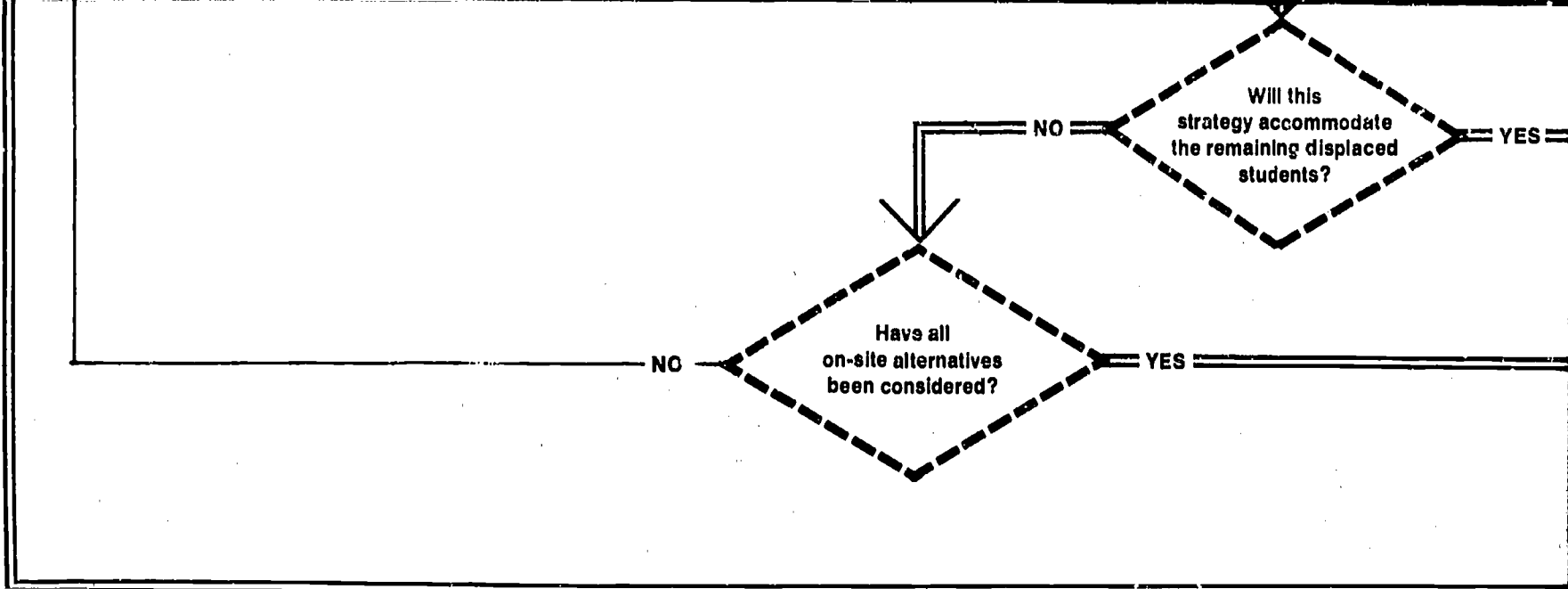
A1 Where the construction program includes an addition or replacement building, the new facility can be completed prior to undertaking work on the old.

Select a temporary housing strategy.

A4 Students can be temporarily re-assigned to rented or loaned facilities in non-school buildings located near the home school.

A5 Portable classroom units located on or near the home school site may be used to house displaced students.

aced by moderniza-
be accommodated
on double or ex-



B: OFF-SITE STRATEGIES

